Amendments to the Specification:

Please replace the paragraph beginning on page 6, line 17, with the following paragraph:

--repeatedly executing an ACS operation and thereby calculating a transition metric value with reference to a transition from ~~an output state~~ a precursor state at a time step n to a target state at a time step n+1, by--

Please replace the paragraph beginning on page 7, line 8, with the following paragraph:

--In accordance with an additional feature of the invention, the first estimated value is separately determined for each ~~output state~~precursor state, specifically on a basis of decisions on input data symbols taken on the path ($P(z_n^i)$) leading to the respective ~~output state~~precursor state (z_n^i).--

Please replace the paragraph beginning on page 7, line 14, with the following paragraph:

--In accordance with another feature of the invention, the first estimated value is determined using the equation $\hat{a}_{n-1}^{(i)} = \hat{a}_{n-2}^{(i)} \exp\left\{j\pi\eta d_{n-1}^{P(z_n^i)}\right\}$, whereby $\hat{a}_{n-1}^{(i)}$ and $\hat{a}_{n-2}^{(i)}$ are the first estimated values for the n-1th and n-2th replacement symbol, respectively, relating to the ~~output state~~precursor state with

index i, $d_{n-1}^{P(Z_n^i)}$ is an input data symbol, decided in the receiver, with reference to a path leading to the respective ~~output state~~precursor state Z_n^i, and η denotes the modulation index.--

Please replace the paragraph beginning on page 8, line 6, with the following paragraph:

--In accordance with again an additional feature of the invention, a second estimated value is separately determined for each ~~output state~~precursor state, specifically on a basis of decisions on input data symbols taken on the path ($P(Z_n^1)$) leading to the respective ~~output state~~precursor state (Z_n^i).--

Please replace the paragraph beginning on page 9, line 1, with the following paragraph:

--a calculating unit for calculating a transition metric value with reference to a transition from an ~~output state~~precursor state at a time step *n* to a target state at a time step *n*+1, and--

Please replace the paragraph beginning on page 9, line 19, with the following paragraph:

--each calculating section is configured to carry out a separate calculation of a first estimated value for the *n*-1th

replacement symbol on the basis of decisions taken on input data symbols for a path ($P(Z_n^i)$) leading to the respective ~~output state~~precursor state (Z_n^i) under consideration.--

Please replace the paragraph beginning on page 10, line 2, with the following paragraph:

--In accordance with yet another feature of the invention, each calculating section is configured to carry out the calculation of the first estimated value using the equation $\hat{a}_{n-1}^{(i)} = \hat{a}_{n-2}^{(i)} \exp\left\{j\pi\eta d_{n-1}^{P(Z_n^i)}\right\}$, where $\hat{a}_{n-1}^{(i)}$ and $\hat{a}_{n-2}^{(i)}$ respectively are the first estimated values for the n-1th and n-2th replacement symbols relating to the ~~output state~~precursor state of index i, $d_{n-1}^{P(Z_n^i)}$ is an input data symbol decided in the receiver with reference to the path leading to the ~~output state~~precursor state (Z_n^i) under consideration, and η denotes the modulation index.--

Please replace the paragraph beginning on page 10, line 23, with the following paragraph:

--each calculating section is configured to carry out a separate calculation of a second estimated value for the n-1th replacement symbol on a basis of decisions taken on input data

symbols for the path ($P(Z_n^i)$) leading to the respective ~~output state~~precursor state (Z_n^i) under consideration.--

Please replace the paragraph beginning on page 31, line 17, with the following paragraph:

--$a_{n-1}^{(i)}$ denoting the replacement symbol assigned to the ith transmitter state, and $d_n^{(i\rightarrow q)}$ denoting that input data symbol which in relation to the time step n leads from the precursor state with index i into the target state with index q. Since the state description in the case of the MLSE according to the invention no longer is performed with the aid of the replacement symbols, $a_{n-1}^{(i)}$ is unknown a priori in the receiver (in the case of the previously described conventional VA, $a_{n-1}^{(i)} = z_n^{0,(i)}$ would be prescribed by the ~~output state~~precursor state considered).--